

## MEMORY MAPPING FOR PARALLEL TURBO DECODING

### ABSTRACT OF THE DISCLOSURE

A routing multiplexer system provide p outputs  
5 based on a selected permutation of p inputs. Each of  
a plurality of modules has two inputs, two outputs  
and a control input and is arranged to supply signals  
at the two inputs to the two outputs in a direct or  
transposed order based on a value of a bit at the  
10 control input. A first  $p/2$  group of the modules are  
coupled to the n inputs and a second  $p/2$  group of the  
modules provide the n outputs. A plurality of  
control bit tables each contains a plurality of bits  
in an arrangement based on a respective permutation.  
15 The memory is responsive to a selected permutation to  
supply bits to the respective modules based on  
respective bit values of a respective control bit  
table, thereby establishing a selected and  
programmable permutation of the inputs to the  
20 outputs.